


# CONSERVATION:

## A BOTANIST'S VIEWPOINT

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## OUTLINE

- Outline evolution of conservation thinking and conservation targeting. Looking at broad approaches, rather than practices and organisations.
- Strengths and weaknesses of various approaches with reference to plants & vegetation; particular focus on East & Sthn Africa.
- Open discussion on issues.

## QUESTIONS

1. Should we focus on the conservation of individual species, or focus primarily on helping conserve habitats and vegetation?
2. Should conservation be mostly site-based, or focus more on whole landscapes?
3. What is the conservation significance of rewilding. And what is the role for just allowing Nature to run its course, albeit with some occasional guidance and nudging?

APPROACHES TO CONSERVATION

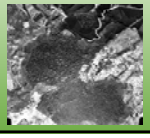
## THE EARLY YEARS

- Resource protection, "set-aside"
- Royal Game and hunting preserves
- Game Reserves and game laws in Africa
- The "evils of poaching"



## Resource protection


- Myths and resource use – spatial, temporal
- Closed harvest seasons
- Forest Reserves
- Needs strong governance
- Mostly for high-value resources


## Royal Game & Game Reserves

- Royal Game
- 'Garden of Eden'
- Generally focussed on highly-desired species
- Ancient oaks
- Moorlands
- Need extensive areas; now less acceptable




APPROACHES TO CONSERVATION

## THE MIDDLE YEARS

- State-owned and state-run National Parks
- Exclusive use. Locals often disenfranchised
- Focus on large charismatic species; less on habitats



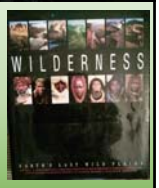

## National Parks & State conservation

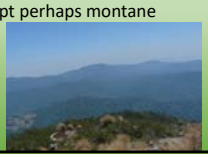
- Based on US Yellowstone model
- In Africa promoted by UNESCO post-WWII
- Exclusion of people and no consumptive use; creates local antagonism
- 5-10% of land area in some countries now protected
- High management costs
- Poaching & control
- Plant / vegetation conservation often incidental



## Wilderness Areas

- Focus on wilderness and space; less on species
- Very few large, little-settled areas left globally
- A rather US-led paradigm
- Limited validity for plants, except perhaps montane situations

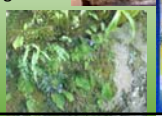


APPROACHES TO CONSERVATION

## THE LATER YEARS

- Red Listing & IUCN, 1960s
- Identification of habitats and geographic areas
- Important Bird Areas (IBAs) & IPAs, leading to Key Biodiversity Areas (KBAs)
- IUCN Red List of Ecosystems



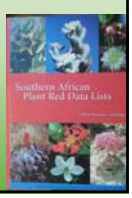




## Red Lists

- Red Listing & IUCN, 1960s
- A more rigorous, scientific process with criteria
- Emphasis on better-known birds, mammals & reptiles
- Data limitations, especially for plants
- Recent upsurge in plant Red Listing
- Ex situ (seed banks, gardens) vs in situ





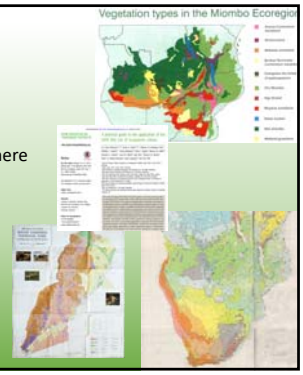

## IPAs and KBAs

- Strict rational criteria
- Various national initiatives underway for both
- IPAs (plants only) rather superseded by KBAs (all biodiversity)
- KBAs now part of UN environmental reporting
- Data limitation for plants re KBAs
- Too many plant data based on historic herbarium records




## Ecosystem Red List

- For Africa based mostly on Ecoregions
- Limitations - what is an ecosystem, where does it stop?
- Poor vegetation maps
- How to measure historic change
- But clear focus on vegetation, not just species




APPROACHES TO CONSERVATION

## LOOKING FORWARD

- Biodiversity corridors
- Greater link amenity to biodiversity conservation
- Landscape level
- Focus on ecological processes
- Rewilding



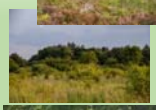
## Landscape level

- Biodiversity corridors linking areas or remnants
- Lawton Report (UK)
- UK National Parks – a planning unit
- No real equivalent in tropical Africa. But South Africa has ecoregion-based system
- "Nature Needs Half" – E.O.Wilson



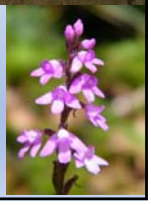
## Rewilding

- Focus on ecological processes
- Not deterministic
- Not same as restoration
- Adaptive or even passive management
- Monitoring & observation
- Accept that some 'treasured' components or species may go

## THEMES RUNING THROUGH

- Resource protection → multiple use
- Species → habitats
- Sites → landscapes
- Biodiversity elements → ecological processes
- Local exclusion → local management
- No management → active management → adaptive management → passive management



SUMMARY: How has botanical conservation fared over the years?

1. No great help in Royal Game / Game Reserve era, except coincidentally through area protection.
2. Great positive impact from National Parks, even though these mostly focussed on scenery and mammals.
3. Focus on threatened species put some plants on agenda. But data poor; lack of charisma.
4. Move to defining areas based on species assemblage allowed identification of better range of potential plant conservation sites.
5. IUCN Ecosystems Red List will help put vegetation on agenda.



## How has botanical conservation fared over the years?

6. However, conservation bodies and funding still driven by large mammals and people issues. Plants tend to take back seat.
7. Focus on landscapes, corridors, ecological processes will make vegetation, not species, the main conservation target.

8. Rewilding looks at landscape engineers & keystone species, not plant species. But object of conservation is vegetation and enhanced biodiversity.
9. Restoration – but to what, when? Mostly based on vegetative cover (native species?) and revamped biodiversity. Plants central.

## QUESTIONS

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